Amendments to the Specification

Please amend paragraph [0017] as follows:

[0017] Next, explanation will be given of a method for concentration of nucleic acids. In this method, electrophoresis is performed twice so as to surely concentrate nucleic acids. Excessive ions in the sample are removed by the first electrophoresis, and the nucleic acids in the sample are concentrated by the second electrophoresis. Firstly, 1% ~~100μL of 1%~~ Triton (registered trademark) X-100, as the nonionic surfactant, is added to the sample containing the nucleic acids, and mixed, and then heated at 96°C for 10 minutes. Then, 100ÿL of 0.2% DPC, as the cationic surfactant, is added to the sample. Alternatively, both the nonionic surfactant and the cationic surfactant may be simultaneously added before the heat treatment. Even if the nucleic acids exist in procaryotic cells of colon bacillus or the like, cell walls are destroyed by the surfactants which are added to the sample for pretreatment. Accordingly, culture solution of colon bacillus or the like can be used as the sample, thereby facilitating the operation of pretreatment of the sample. The pretreatment is performed as the above, and direct voltage of 100V is applied so as to perform electrophoresis for 10 minutes, thereby removing the excessive ions from the sample. Subsequently, direct voltage of 125 to 150V is applied so as to perform electrophoresis for 120 minutes, thereby recovering the nucleic acids at the side of positive electrode.

Please amend paragraph [0047] as follows:

[0047] Explanation will be given of an embodiment of the present invention. Firstly, an electrophoresis tank for electrophoresis will be described. Fig. 4 illustrates a first electrophoresis tank 21. An electrophoresis tank 21 is divided into a negative electrode side tank 22 and a positive electrode side tank 23 by partitions 24 and 25. The partitions 24 and 25 are disposed at a center of the electrophoresis tank 21, and a sampling unit 26 is attached to the partitions 24 and 25. One end of the sampling unit 26 is projected into the negative electrode side tank 22, and the other end thereof is projected into the positive electrode side tank 23. ~~A positive electrode side portion of the sampling unit 26 is filled with gel.~~ A negative electrode side portion of the sampling unit

26 is filled with gel, and is provided in its side surface with an injection hole through which a sample is injected into the sample unit. At the time of electrophoresis, the injection hole is shut with a plug. A negative electrode is inserted into the negative electrode side tank 22 and a positive electrode is inserted into the positive electrode side tank 23 so as to apply voltage to the electrophoresis tank 21.

Please amend paragraph [0050] as follows:

[0050] After removing excessive ions from the first electrophoresis tank 21, the connection part 33 and the filter part 34 are connected to the sampling unit 26. An O-ling ~~O-ring~~ is interposed in each junction so as to prevent leak of the solution. A solution prepared by mixing 100% ethanol and 1x TAE with the mixture ratio of 6:4 is supplied into the connection part 33, and TE-1 (10mM Tris-HCl, 0.1mM EDTA, pH 8.0) is supplied into the sampling unit 26 ~~the filter part 34~~.

Please amend paragraph [0053] as follows:

[0053] Explanation will be given of the connection part 33. Fig. 10 is a perspective view of the connection part, and Fig. 11 is a sectional side view of the connection part. Similar to the sampling unit 26, a centrifugal filter unit of Millipore is processed so that that an ultrafiltration membrane is removed therefrom and a hole having a 5mm diameter is opened therein, thereby constructing the connection part 33. The connection part 33 comprises a cylinder body 41 and a base 43. The cylinder body 41 is connected to the base 43. The base 43 is formed to be a stepped column, and a vertical hole 44 penetrates the base 43. Gel 48 having thickness of several mm is disposed in the cylinder body 41. In the cylinder body 41, the gel 48 is disposed on an upper surface of the base 43 so as to prevent liquid from flowing from/to the sampling unit 26. ~~filter part 34.~~

Please amend paragraph [0066] as follows:

[0066] According to a method of the present invention for concentration and purification of a nucleic acid using electrophoresis, cationic surfactant and nonionic surfactant are added to a sample containing a nucleic acid so as to adjust electric charge

of an impurity in the sample, and then the sample is placed in an electric field for electrophoresis so as to concentrate and purify the nucleic acid. Accordingly, the adsorption of the cationic surfactant can be adjusted by adjusting a ratio between the cationic surfactant and the nonionic surfactant, thereby easily adjusting migration of the electrophoresed impurity. The nonionic surfactant adsorbs the nucleic acid so as to prevent the cationic surfactant from adsorbing the nucleic acid.

Please amend paragraph [0067]] as follows:

[0067] The electric charge of substance other than the nucleic acid is adjusted by the adsorption thereof the cationic surfactant, and the adsorption is adjusted by the added amount of the nonionic surfactant. Accordingly, the adsorption ratio of the impurity to the cationic surfactant and the ratio of the nonionic surfactant can be operated easily. Furthermore, the electric charge of the impurity can be adjusted by easy operation. The nonionic surfactant adsorbs to the nucleic acid so as to prevent the cationic surfactant from adsorbing the nucleic acid.